

# WEST COAST GOVERNORS' AGREEMENT on OCEAN HEALTH

CALIFORNIA OREGON WASHINGTON

## WCGA Action Plan Progress Report 2008–2010

The West Coast Governors' Agreement on Ocean Health (WCGA) is a regional collaboration to protect and manage ocean and coastal resources along the entire West Coast. This document summarizes key accomplishments to date in advancing regional priorities identified in the WCGA Action Plan and corresponding Action Coordination Team Work Plans.



Launched in September 2006 by the governors of California, Oregon, and Washington, the WCGA advances regional ocean governance and seeks to achieve the following seven goals:

- Ensuring clean coastal waters and beaches;
- Protecting and restoring ocean and coastal habitats;
- Promoting the effective implementation of ecosystem-based management;
- Reducing adverse impacts of offshore development;
- Increasing ocean awareness and literacy among residents;
- Expanding ocean and coastal scientific information, research, and monitoring; and
- Fostering sustainable economic development in our communities.

In addition to these seven priority areas, the three governors took immediate actions to:

1. Request new federal funding for nonpoint source pollution control programs;
2. Oppose new oil and gas leasing, development, and production offshore;
3. Develop a research plan for the West Coast region; and
4. Secure the participation of Department of Commerce, US Environmental Protection Agency, and US Department of Interior as federal WCGA co-leads to provide technical support.

### Our 10 Action Coordination Teams

- ❖ Climate Change
- ❖ Polluted Runoff
- ❖ Marine Debris
- ❖ *Spartina* Eradication
- ❖ Integrated Ecosystem Assessments
- ❖ Renewable Ocean Energy
- ❖ Ocean Education
- ❖ Seafloor Mapping
- ❖ Sustainable Communities
- ❖ Sediment Management

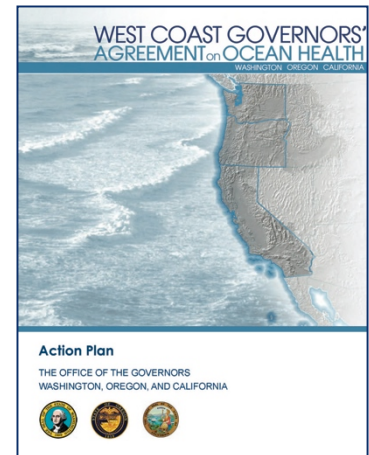


"Healthy oceans matter . . . because they are vital to our health, to our prosperity, to our security, and also to our ability to adapt to climate change. They matter because they affect the quality of our life."

- Jane Lubchenco, Ph.D., Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator

## WCGA Action Plan

In 2008, the WCGA released an action plan consisting of 26 action items to achieve its seven priority goals. The plan also highlights two important overarching actions: 1) establish a national ocean trust fund and 2) mitigate and adapt to climate change impacts. In late 2008, 10 Action Coordination Teams representing agencies, tribal governments, academia, and stakeholders along the West Coast were formed to develop strategies to achieve many of the priorities in the WCGA Action Plan. To date, eight of the 10 Action Coordination Teams have generated work plans that further the goals of the WCGA Action Plan using the best available science. The remaining two, Sustainable Coastal Communities and Integrated Ecosystem Assessments, have completed their draft work plans and are scheduled to finalize each plan in 2011.



### Projects in Progress with FY10 Congressional Funding

In 2010, the WCGA received \$500,000 to implement high priority actions described in the 2008 WCGA Action Plan and corresponding Action Coordination Team work plans. Projects in progress as a result of that funding include:

- **Climate Change**—Characterize how near-shore habitat will be impacted by climate change.
- **Polluted Runoff**—Develop a low impact development web portal for the West Coast.
- **Marine Debris**—Complete a West Coast Marine Debris Strategy and launch the West Coast Marine Debris Alliance.
- **Marine Invasive Species**—Support *Spartina* eradication efforts on Cox Island in Oregon and in the Humboldt Bay region of California.
- **Renewable Ocean Energy**—Produce a Renewable Energy Planning Guidebook.
- **Ocean Education**—Analyze the results of a tri-state K-12 teachers needs assessment for ocean education.
- **Seafloor Mapping**—Conduct a pilot study to determine the feasibility of constructing bathymetric, geologic, habitat and other thematic maps in coastal and estuarine zones.
- **Sediment Management**—Support an Oregon and Washington Lower Columbia River Region Workshop to discuss needs and lessons learned from California Coastal Sediment Management Workgroup experiences.

## WCGA Lead Agencies



The Executive Committee of the WCGA is comprised of three state leads, including the offices of the governors of California, Oregon, and Washington, and three federal leads, including the Department of Commerce (National Oceanic and Atmospheric Administration), the Environmental Protection Agency, and the Department of the Interior (Bureau of Ocean Energy Management, Regulation and Enforcement). The Executive Committee informs and helps guide the progress of the Action Coordination Teams.

# WCGA Action Plan Progress Report 2008–2010

The WCGA Action Plan describes ocean and coastal regional issues and 26 corresponding actions to address some of the most challenging issues facing the West Coast. The following provides progress to date made in each of these areas. Creation of the 2008 WCGA Action Plan and all ACT work plans were achieved with existing resources of the WCGA. For FY10, Congress appropriated \$500,000 to implement actions in the plan, listed below as FY10 funded projects.

## Climate Change

*Assess West Coast shoreline changes and anticipated impacts to coastal areas and communities due to climate change over the next several decades, and develop actions to mitigate and adapt to the impacts of climate change and related coastal hazards.*

### **Accomplishments:**

- **Sponsored a West Coast Sea Level Rise Study by the National Research Council of the National Academies of Science**—In 2010, the US Geological Survey, National Oceanic and Atmospheric Administration, US Army Corps of Engineers, and the states of California, Oregon, and Washington sponsored a study with the National Research Council to estimate future sea level rise. The study will evaluate the major contributors to global sea level rise, predict the range of sea level rise for 2030, 2050, and 2100, and evaluate uncertainties associated with these estimates. In addition, the study will provide values for local and regional contributions to sea level rise.
- **The three governors and the premier of British Columbia signed the Action Plan for Ocean Conservation and Climate Change Adaptation of the Pacific Coast Collaborative.**

**\*FY10 Funded Project:** Characterize how near-shore habitat will be impacted by climate change.

## **Priority Area 1: Ensure Clean Coastal Waters and Beaches**

### **Polluted Runoff**

**Action 1.1**—Work with the Administration and U.S. Congress to provide full funding for coastal water quality programs to reduce polluted runoff, and enhance monitoring and enforcement of water quality regulations to improve the health of West Coast coastal waters.

**Action 1.2**—Combat nonpoint source pollution.

### **Accomplishments:**

- **The West Coast Estuaries Initiative grant funding was awarded in US Environmental Protection Agency Regions IX and X, which provided grants to improve coastal water resources.**

**\*FY10 Funded Project:** Develop a low impact development web portal for the West Coast.



Sign adjacent to a California stream warning that runoff of storm drain water may cause illness. Bruce Perry, Dept. of Geological Sciences, CSU Long Beach.



## Harmful Algal Blooms and Hypoxia

*Action 1.3—Exchange information among experts in all three states on management tools and techniques to promote development and operation of predictive capabilities of harmful algal blooms and hypoxia. Support the expansion of the ocean observing system monitoring efforts among the three states.*

### **Accomplishments:**

- **A West Coast Regional Harmful Algal Bloom (HAB) Summit was held in Portland, Oregon in February 2009. The summit focused on ways to improve HAB monitoring, forecasting and response coast-wide. Key summit outcomes:**
  - Produced a peer-reviewed scientific paper in *Harmful Algae* titled, “Harmful Algal Blooms in the West Coast Region: History, Trends, Causes, and Impacts,” that describes the scope of the HAB problem on the West Coast and provides updated information for regional HAB management plans.
  - Generated a draft *West Coast Regional HAB Research and Action Plan* that will be used to guide research prioritization for NOAA’s National HAB programs on the West Coast.
  - Generated a draft *West Coast Regional HAB Monitoring, Alert, and Response Network*, a regional monitoring and event response plan that improves response to HAB events through prediction of HABs, similar to current day weather forecasts.

## Marine Debris

*Action 1.4—Establish baseline estimates of marine debris and derelict gear off the West Coast and set reduction goals.*

### **Accomplishments:**

- Convened with subject experts from the region and Canada for two of three workshops to develop a marine debris strategy and implementation plan for the West Coast. The two workshops to date focused on derelict fishing gear and land-based debris. The third workshop, to be held in the fall of 2011, will focus on finalizing the Marine Debris Strategy and next steps to establish the West Coast Marine Debris Alliance.
- Generated an inventory of derelict fishing gear survey and removal activities and developed preliminary guidelines for a derelict fishing gear database.
- Secured funding to initiate the creation of the West Coast marine debris database. This database will incorporate the derelict fishing gear database and provide critical information to establish baseline estimates of marine debris.
- The WCGA urged NOAA to help support a collaborative effort to reduce marine debris throughout the Pacific.



The winning artwork in the NOAA 2010 Marine Debris Student Art Contest is titled, “Otter Not Litter,” by Ektaa T., a 6th grade student from Poway, California. The artwork will be featured as the cover art for the 2011 Marine Debris Planner.

**\*FY10 Funded Project:** Complete the West Coast Marine Debris Strategy, launch the West Coast Marine Debris Alliance, and establish a marine debris database.

## **Oil Spill Prevention and Response**

*Action 1.5—Ensure adequate oil spill prevention, preparedness and response capabilities on the West Coast and enhance federal and state collaboration. Develop additional capacity for rescue and salvage operations.*

The Pacific States/British Columbia Oil Spill Task Force (<http://www.oilspilltaskforce.org/>), in partnership with the WCGA, accomplished the following:

- Collected data on oil spills throughout the region to identify trends and gain information on sources, activities, and causes of spills.
- Hosted the 2<sup>nd</sup> Clean Pacific Conference in 2009.
- Monitored the hull status of tankers calling on West Coast ports (92% of tank ships and 79% of tank barges serving the West Coast are now double-hulled).
- Provided mutual aid to the Deepwater Horizon spill response in the Gulf of Mexico while ensuring that adequate response capacity remained on the West Coast.
- Cooperated with federal agencies and coastal states to share information and promote improvements in spill policies; supported a stakeholder work group to examine oil spill planning and preparedness for U.S./Canadian borders; and provided a forum to state and federal agencies to work on oil spill research and development and share information.

## **Marine Shipping Emission Controls**

*Action 1.6—Urge the International Maritime Organization to adopt the U.S. proposal, which sets stringent emission standards for oceangoing vessels.*

### **Accomplishments:**

- Supported passage of HR 802, the Maritime Pollution Prevention Act of 2007, for stricter global shipping emission standards to protect the health of people in communities living near ports. A key outcome of the passage of this Act was the 2010 designation of a North American Emission Control Area, which will enforce stringent international emission standards for ships off U.S. coasts.

## ***Priority Area 2: Protect and Restore Ocean and Coastal Habitats***

### **Marine Invasive Species**

*Action 2.3—Prevent the future introduction of marine invasive species.*

*Action 2.4—Eradicate non-native cordgrasses (genus *Spartina*).*

### **Accomplishments:**

- In California, 90% (700 acres) of non-native *Spartina* has been removed from San Francisco Bay since 2005. In Humboldt Bay, eradication of about 20% of the regional infestation is underway. Non-native *Spartina* has been added to the state's Noxious Weed List.



Mechanized eradication of *Spartina alterniflora* in Willapa Bay, Washington. Photo courtesy of Coastal and Estuarine Research Federation.

- In Oregon, The Nature Conservancy and Oregon Department of Agriculture reached an agreement to use landscaping fabric and herbicides to eradicate non-native *Spartina patens* in the Siuslaw Estuary, the only known infestation in the state. The Oregon Legislature established an emergency fund and provided \$350,000 for invasive species rapid response.
- In Washington State, over 99% of non-native *Spartina* has been removed. The program has reduced the statewide infestation from a high of 9,000 acres in 2003 to 27 acres during 2010.
- British Columbia, working with the WCGA, removed 10% (0.2 acres) of the estimated non-native *Spartina* infestation. A *Spartina* management plan, modeled after Oregon and Alaska, was prepared in 2010, and staff is securing approval for herbicide control in British

Columbia, currently planned for the 2011 field season.

- The Pacific Ballast Water Group ([www.psmfc.org/ballast/index.html](http://www.psmfc.org/ballast/index.html)) hosted meetings in 2009 and 2010, and is focusing on current federal ballast water discharge rule making by the US Coast Guard as well as pending re-issuance of the EPA Vessel General Permit to ensure coordination with state ballast water programs. The group continues to encourage and support funding efforts for development and testing of ballast water treatment technologies suitable for vessels operating in West Coast waters.

**\*FY10 Funded Project:** Support *Spartina* eradication efforts on Cox Island in Oregon and in the Humboldt Bay region of California.

### Priority Area 3: Promote the Effective Implementation of Ecosystem-Based Management

#### Ecosystem-Based Management

Action 3.1—Examine ongoing community-based efforts using ecosystem management (EBM) principles in all three states and share lessons learned from these initiatives to encourage effective ecosystem-based management efforts across the West Coast.

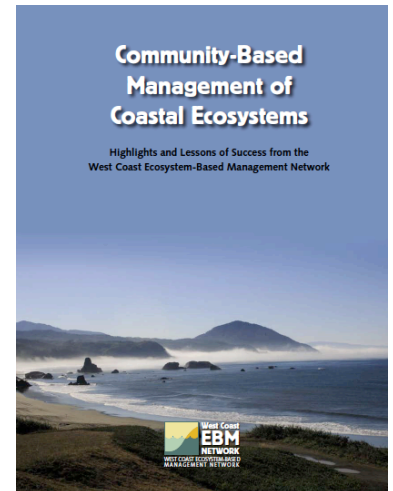
Action 3.2—Assess physical, biological, chemical, and socioeconomic factors in ecosystem health across the West Coast to establish standards and indicators for ocean health.

Action 3.3—Strengthen coordination among the three states and their representatives on the Pacific Fishery Management Council (PFMC).

#### Accomplishments:

- An Integrated Ecosystem Assessment (IEA) was conducted in Puget Sound that laid the foundation for the development of the California Current IEA.

- WCGA supported NOAA's successful efforts to ban commercial harvest of krill off the West Coast.
- In 2008, the West Coast EBM Network was established, and in 2009, the Network hired a coordinator to link locally driven initiatives in coastal communities and to coordinate with the WCGA to share outcomes and lessons learned.
- In 2009, the West Coast EBM Network released a guide, "Community-Based Management of Coastal Ecosystems: Highlights and Lessons of Success from the West Coast EBM Network," ([www.westcoastebm.org](http://www.westcoastebm.org)) which identifies five key steps its member initiatives have taken to implement ecosystem-based management in their respective communities.
- The West Coast EBM Network increased awareness of EBM progress on the West Coast by highlighting tangible outcomes of its projects, including:
  - Local fishers and stakeholders collaborating to design and establish a marine protected area (MPA) through the Port Orford Ocean Resource Team.
  - The development of the Humboldt Bay Initiative, including release of an EBM Strategic Plan.
  - The San Luis Obispo Science and Ecosystem Alliance efforts to build the California Collaborative Fisheries Research Project.
  - Wetland restoration efforts and installation of an innovative underwater sill for ecosystem protection at Elkhorn Slough.
  - The creation of a sustainable water cycle, habitat restoration, and enhanced public access for the greater Ventura, California watershed.



The West Coast Ecosystem-Based Management Network guide identified five steps member organizations have taken to implement EBM in their communities.

## Priority Area 4: Reduce Adverse Impacts of Offshore Energy Development

### Offshore Oil and Gas Leasing

Action 4.1—Continue to oppose new oil and gas leasing, development, and production in ocean waters off the West Coast.

#### Accomplishments:

- In both 2006 and 2008, the governors of California, Oregon, and Washington opposed new offshore oil and gas leasing off the West Coast.
- In 2008, the WCGA commented on the Five-Year Outer Continental Shelf Oil and Gas Leasing Program, encouraging the federal government to seek realistic short- and long-term solutions to energy issues.



Offshore platform, Santa Barbara Channel. Photo courtesy of Ralph Vasquez, Department of Interior/Bureau of Ocean Energy Management, Regulation and Enforcement.



## Renewable Ocean Energy

*Action 4.2—Explore the feasibility for offshore alternative ocean energy development and evaluate the potential environmental impacts of these technologies.*

### **Accomplishments:**

- Held a regional workshop on renewable ocean energy in 2009 focused on gathering input for a coast-wide planning project for siting energy projects.
- Oversaw the development of a Regulatory Framework Handbook outlining the process for hydrokinetic technology permitting and licensing for California and Oregon. The handbook was developed by Pacific Energy Ventures with funding from the Department of Energy and Oregon Wave Energy Trust.
- Provided input on the development of a “marine and hydrokinetic energy” database developed by the U.S. Department of Energy. The database provides information on companies with wave, current, tidal, and ocean thermal technologies.
- The Oregon Wave Energy Trust funded environmental and socio-economic impact assessments (including cumulative impacts) of wave energy projects and an inventory of infrastructure valuable to wave energy siting.



*Electricity generated from wave energy.  
Illustration by Bryan Christie, Ocean Power  
Technologies.*

**\*FY10 Funded Project:** Produce a Renewable Energy Planning Guidebook.

## **Priority Area 5: Increase Ocean Awareness and Literacy Among Citizens**

### Ocean Awareness and Literacy

*Action 5.1—Integrate ocean science and conservation into expanded environmental education curricula.*

*Action 5.2—Support ocean awareness efforts and encourage improvement and expansion of self-directed learning institutions and volunteer programs.*

### **Accomplishments:**

- Conducted a survey of K-12 educators to determine the challenges in incorporating ocean education into their curriculum and what resources they need to effectively teach ocean literacy to their students.
- Promoted the integration of ocean literacy principles into K-12 science standards revisions in Oregon and Washington, and worked with the Education and Environment Initiative in California to address ocean literacy.

**\*FY10 Funded Project:** Analyze the results of the tri-state K-12 teachers needs assessment for education.



## **Priority 6: Expand Ocean and Coastal Scientific Information, Research, and Monitoring**

### **Regional Marine Research**

*Action 6.1—Develop a regional research agenda in partnership with the four Sea Grant programs, and seek federal support to fill marine research needs.*

#### **Accomplishments:**

- The West Coast Sea Grant Programs released a 2009 report, “West Coast Regional Marine Research and Information Needs.”
- Four Sea Grant fellows were hired in 2011 to work with the WCGA to advance outcomes relative to coastal and marine spatial planning, regional research priorities and implementation, integrated ecosystem assessments, and sustainable communities.

### **Ocean Observing and Long-Term Monitoring**

*Action 6.2—Support full federal funding for the long-term maintenance of ocean observing systems and monitoring assets along the West Coast for the development of products that address management needs.*

#### **Accomplishments:**

- In 2010, the governors of California, Oregon, and Washington and the premier of British Columbia urged the United States and Canadian federal governments to continue to support ocean observing systems.

### **Seafloor Mapping**

*Action 6.3—Complete a seafloor map of the bathymetry, benthic substrate, relief, geology, and habitat of all state tidelands and submerged lands out to three miles.*

#### **Accomplishments:**

- Data collection and processing—California completed a formal gap analysis and will complete offshore bathymetry and backscatter mapping instate waters by mid-2011. Oregon completed a formal gap analysis and has mapped 48% of its seafloor; Washington completed an informal gap analysis and has completed mapping 20% of its seafloor.
- Data management—Comprehensive GIS-ready map products are currently being developed for California and Oregon for their respective state waters.
- Developed a fact sheet on seafloor mapping, and California and Washington have websites with seafloor mapping information (<http://walrus.wr.usgs.gov/mapping/csmp/>; <http://seafloor/csumb.edu>; [www.activetectonics.coas.oregonstate.edu](http://www.activetectonics.coas.oregonstate.edu)).

**\*FY10 Funded Project:** Conduct a pilot study to determine the feasibility of constructing bathymetric, geologic, habitat and other thematic maps in coastal and estuarine zones.

## Priority Area 7: Foster Sustainable Economic Development in Coastal Communities

### Working Waterfronts and Sustainable Coastal Economies

Action 7.1—Support local planning efforts for working waterfronts to promote sustainable fisheries and prioritize coastal-dependent businesses and infrastructure.

Action 7.2—Promote and expand environmentally responsible operations and infrastructure at ports and harbors. Support revitalization efforts for struggling ports.

Action 7.3—Assess the health and economic vitality of coastal communities by identifying current economic conditions.

#### Accomplishments:

- In 2008, the WCGA supported the allocation of \$70 million in federal disaster funding for closure of the West Coast commercial salmon fishery.



Commercial fishing boats in San Francisco, California.  
Photo by Justin Sullivan/Getty Images North America.

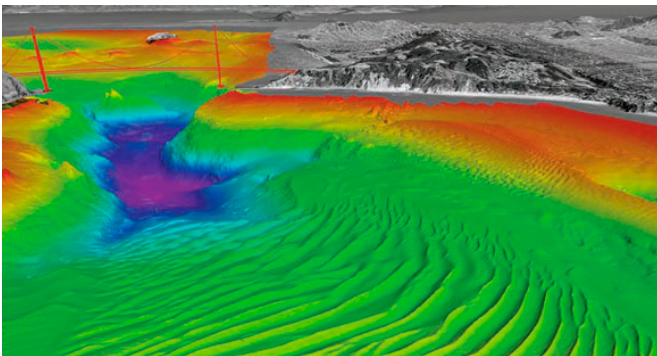
### Regional Sediment Management

Action 7.4—Develop regional sediment management plans.

#### Accomplishments:

- The California Sediment Management Workgroup conducted a 2010 California Beach Erosion Assessment Survey and produced a report that identifies important beach erosion control areas and management options to address coastal erosion in these areas.

**\*FY10 Funded Project:** Support an Oregon and Washington Lower Columbia River Region Workshop to discuss needs and lessons learned from the experiences of the California Coastal Sediment Management Workgroup.



Giant sand waves on the sea floor west of the Golden Gate, mapped for the first time at high resolution in 2004-5 in a cooperative effort by the US Geological Survey and California State University, Monterey Bay.

# Advancing Regional Ocean Governance and Coastal and Marine Spatial Planning

In 2010, the WCGA received a grant from the Gordon and Betty Moore Foundation to further coastal and marine spatial planning (CMSP) on the West Coast. CMSP is a planning process that uses science to analyze existing and potential uses of the ocean and its coasts to protect habitat and reduce conflicts among users. In 2010, the WCGA submitted a proposal to NOAA requesting \$4.5 million to advance the WCGA Action Plan, CMSP, and other actions important to West Coast ocean health and the coastal communities and others that rely on healthy ocean ecosystems.

The following is a description of high priority actions of regional importance that were included in the \$4.5 million funding proposal:

- Develop a West Coast data network to address regional ocean and coastal issues.
- Gather information needed to identify ecologically important habitats and areas, and map areas of human use.
- Identify and test the best tools to assist states and federal agencies and the WCGA in working with tribes, stakeholders, coastal communities, and partners to plan and make decisions about ocean uses and resources.
- Working with the federal government and tribal sovereign governments, create a West Coast regional planning body to engage partners, coastal communities, stakeholders, technical and scientific experts, local governments, and the general public in achieving ocean and coastal priorities.
- Realize the goals of the WCGA Action Plan by defining the highest priority action items, providing WCGA Action Coordination Teams with the resources to succeed, and providing funding for the WCGA to operate.

